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The Issuance and Transfer of Digital Bonds under Singapore Private Law

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The background of the page is a dark, abstract digital art composition. It features a central, dark, circular void. Radiating from this center are numerous thin, glowing lines of light in various colors, including cyan, magenta, yellow, and green. These lines are densely packed and create a sense of depth and movement, resembling a fiber optic network or a complex data visualization. The overall effect is futuristic and high-tech.



Contents



The clear potential and use cases of digital assets continue to expand across many different fronts and sectors. Singapore and Hong Kong SAR have already developed into important digital asset hubs. Each city benefits from supportive government positions, stream-lined regulatory frameworks, and robust financial markets infrastructures.

Legal certainty and balanced regulation of the many different forms of digital assets are necessary steps to continue the development of these markets. Moreover, consistent standards and legal frameworks across jurisdictions are required given the borderless nature of these products.

Singapore and Hong Kong SAR share many fundamental principles with English common law. Recent English law developments, including the work of the UK Jurisdictional Taskforce of LawtechUK and the Law Commission of England and Wales, have provided important clarity to the legal treatment of digital assets.

This paper considers whether Singapore law can support the issuance and transfer of debt securities using a system deploying DLT such as blockchain and concludes that Singapore law is sufficiently flexible and resilient to accommodate the issuance and transfer of these debt securities to serve the needs of market participants. We have also published a [separate paper](#) considering similar issues under Hong Kong law and have arrived at a similar conclusion.

We believe that Singapore and Hong Kong are well positioned to be global leaders in the next stage of digital asset development. We look forward to working closely with all market participants on next steps to continue the development and maturation of this innovative and transformative asset class.



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The digital assets landscape has evolved enormously since the introduction of Bitcoin, the first cryptocurrency, in 2009. In recent years, distributed ledger technology (“**DLT**”) has been a catalyst for innovation in financial markets. Platform and exchange providers, both existing and prospective, have sought to utilise these new technologies to redesign the building blocks of financial market infrastructures. Existing financial products are likewise undergoing transformation. The growing use of DLT in securities issuances is a significant development and demonstrates the potential of tokenisation as a technique in the digitalization of financial and other real-world assets.

The digital securities market in Singapore has been developing quickly in recent years. Digital asset exchanges and platforms which started under the Monetary Authority of Singapore’s (“**MAS**”) sandbox schemes have completed their sandbox trials and have formally commenced operations for a number of years. Asset classes that have been tokenised on these platforms include bonds, commercial paper, private equity and private funds. The MAS’ commitment to developing Singapore’s digital ecosystem is also evident through initiatives such as Project Guardian, a collaborative initiative by the MAS with the financial industry to test the feasibility of applications in asset tokenisation and decentralised finance.¹

In Asia, in addition to developments in Singapore, Hong Kong is emerging as an important global digital assets hub. Hong Kong and Singapore share similar common law principles and many of the English law principles are equally applicable or persuasive in Hong Kong and Singapore. Government support for innovation and digital asset development is clear. In February 2023, the Hong Kong Government issued the first tokenised green bond², setting a benchmark for the market for issuances of this type. The Hong Kong Government has since released a report to summarise its experience from this tokenised green bond offering and outline potential next steps to promote the wider use of tokenisation technology in Hong Kong’s bond market.³

In February 2023, the UK Jurisdictional Taskforce of LawtechUK (the “**UKJT**”) published its second legal statement on the issuance and transfer of digital securities under English private law (the “**UKJT Paper**”).⁴ The UKJT Paper addressed the critical questions of whether equity, debt or other securities can be validly issued and transferred under English law using DLT such as blockchain systems. The UKJT Paper concluded that, subject to the satisfaction of certain corporate requirements which apply primarily to digital shares in UK companies, English law can accommodate digital securities circulated on a blockchain. With respect to debt and other contractual securities where issuers have freedom to choose the governing law, English law has traditionally been a preferred legal system for debt securities in the euromarket. The UKJT Paper confirmed that English law, in particular the inherent flexibility of common law, can accommodate novel asset classes and financial structures such as digital securities without statutory intervention.

Following the publication of the UKJT Paper, in June 2023 the Law Commission of England and Wales released its final report on digital assets (the “**Law Commission Report**”) which focussed on crypto-tokens and sets out recommendations for statutory reform and common law development.⁵ While the report contains some recommendations for reform, the Law Commission Report concludes that the common law system in the UK is well placed to provide a coherent and globally relevant regime for existing and new types of digital assets, and that common law is sufficiently resilient and flexible to accommodate new digital asset classes.

1 See Project Guardian information page, as part of MAS’ schemes and initiatives: <https://www.mas.gov.sg/schemes-and-initiatives/project-guardian>.

2 HKSAR Government’s Inaugural Tokenised Green Bond Offering (accessible at: <https://www.hkma.gov.hk/eng/news-and-media/press-releases/2023/02/20230216-3/>).

3 Report on Bond Tokenisation in Hong Kong issued by the Hong Kong Monetary Authority on 24 August 2023 (accessible at: <https://www.hkma.gov.hk/eng/news-and-media/press-releases/2023/08/20230824-3/>).

4 Legal statement on the issuance and transfer of digital securities under English private law (accessible at: <https://lawtechuk.io/>). This second legal statement follows from an earlier legal statement by the UKJT in November 2019 - Legal statement on cryptoassets and smart contracts (accessible at the same link above).

5 The Law Commission Report (see [link](#)). Note that the Law Commission Report mainly focusses crypto-tokens (which is defined as “a notional quantity unit manifested by the combination of the active operation of software by a network of participants and network-instantiated data” (see page 11 of the Law Commission Report)).

Singapore boasts a thriving and well-established market for equity and debt securities.⁶ While issuers in Singapore are generally comfortable with issuing securities in the international markets using English or New York governing law, some issuers nevertheless prefer the use of Singapore law governed securities and documents. Government-linked or government-backed issuers as well as corporate issuers which have their centre of main interests in Singapore typically have a strong preference towards using Singapore law as the governing law. As such, it is a natural and an important progression for issuers in Singapore to look into the feasibility of issuing digital securities, including how various legal aspects of such securities are dealt with locally.

As a common law jurisdiction, Singapore law also has inherent flexibility that enables it to adapt and accommodate novel asset classes to meet commercial needs. Please refer to [Appendix 1](#) for a discussion of recent Singapore case law which has considered a number of pertinent issues, including whether digital assets may be recognized as property under Singapore law. These Singapore decisions have formed a firm foundation for the continued development of the digital securities market in Singapore, providing increased certainty on the approach to, and legal treatment of, digital assets by the courts.

In this emerging space, English judgments have referred to some of these early Singapore decisions on digital assets relating to the possibility of treating cryptocurrency assets as property.⁷ Given the common principles and approach across common law jurisdictions, there is substantial consistency in terms of the legal approach to digital securities and commonality in terms of the legal solutions adopted. This paper analyses similar issues as the UKJT paper (as supported by the Law Commission Report) under Singapore private law.



Scope

This paper is focussed on the question of whether Singapore private law can support the issuance and transfer of debt securities using a system deploying DLT such as blockchain systems. Although the UKJT paper discussed three types of digital securities, namely, digital bonds, digital proprietary securities and digital equity (share) securities, this paper looks at the issues solely from the lens of digital bonds, given that digital bonds are the most common use case for tokenisation.

We note in particular that, similar to the position under English law, digital shares in Singapore companies raise a number of specific questions relating to corporate requirements imposed by the Companies Act 1967 of Singapore (the “**Companies Act**”), and these are beyond the scope of this paper.

⁶ In Singapore, in the six months ended 31 December 2022, the Singapore Exchange Securities Trading Limited saw robust listing activity across the Equities and Fixed Income, Currencies and Commodities sectors despite challenging macroeconomic conditions, with revenue increasing 3% and 35% respectively, year on year. See FY2023 press release released in February 2023: <https://investorrelations.sgx.com/static-files/e1002dbf-6b40-4786-b53b-836230822a12>.

⁷ For example, *AA v Persons Unknown* [2019] EWHC 3556 (Comm) at [59], which referred to *Quoine Pte Ltd v B2C2 Ltd* [2019] SGHC(I) 03 (accessible at <https://www.sicc.gov.sg/docs/default-source/modules-document/judgments/b2c2-ltd-v-quoine-pte-ltd.pdf>).



Forms of digital bonds



A digital bond issuance can be structured as “native” or “non-native”. The term “native” in the context of digital debt securities refers to digital bonds issued directly on a DLT platform. In contrast, the term “non-native” refers to bonds first issued off-platform and then tokenised on the DLT platform.

As a starting point, the more common structure is a “non-native” issuance whereby the bonds are first issued off-chain and then tokenised on-chain. Conventional bonds may, for example, be issued into a top-level intermediary (for example, a central securities depository (“**CSD**”)) and credited to the account of a participant in the CSD’s system. The intermediary or off-chain holder has express rights to act against the issuer and can enforce the interests of holders. However, where there is no intermediation and the securities are created directly in the blockchain as “native” tokens, the holders’ rights as against the issuer and other third parties would depend entirely on the creation and transfer of such rights in the blockchain and DLT under Singapore private law.

DLT such as blockchain systems can potentially facilitate the issuance of the following types of digital bonds: (i) bearer form (ie bearer tokens); (ii) registered form (ie registered tokens); or (iii) a form whereby the holder is identified by reference to records maintained by a third-party operator (acting in a principal capacity) (ie claims tokens):

- > **Bearer tokens:** This is a digital replication of traditional bearer bonds. A bearer token is an intangible asset in its own right. The rights in respect of such tokens are determined by reference to the controller of such tokens, ie the person who controls the tokens may exercise the rights to which the tokenholder is entitled. The transfer mechanism for such tokens refers to the transfer of practical control of the tokens;
- > **Registered tokens:** Registered tokens may be seen as mere data or evidence of rights. The holder who can exercise rights in respect of such token are determined by reference to a DLT-based register controlled by the registrar, which may be the issuer or an agent of the issuer. The transfer mechanism refers to the updating of token balances recorded to a smart contract deployed by the registrar;
- > **Claims tokens:** Claims tokens are mere data or evidence of rights. The rights are determined by reference to entries in a DLT-based system controlled by a third-party operator. The transfer mechanism refers to the updating of token balances recorded to a smart contract deployed by the operator.

Please see diagrams illustrating these three forms at [Appendix 2](#).

Each form of token may give rise to different legal issues, irrespective of whether the securities are directly issued on the blockchain as “native” tokens or are issued indirectly by or through intermediaries as “non-native” tokens. Registered tokens and claims tokens may not give rise to as many novel legal issues under Singapore law since conventional registered bond structures already use electronic databases to record and effect transfers of beneficial interests in bonds without significant difficulty. Consistent with the approach under the UKJT paper, we have therefore focussed this paper on digital bonds intended to be capable of circulation without custodians or any other form of intermediation as these present more novel issues. Nevertheless, our discussion applies generally across all three types of tokens, including registered tokens and claims tokens, save as specified otherwise.



In order to determine whether the various types of digital debt securities can be created and transferred, a number of legal issues have to be considered. Some of these issues are ones which capital markets lawyers will be very familiar with but with the added nuances presented by the digital/ DLT element. As such, we consider the following key legal issues for the issuance and transfer of digital bonds under Singapore law:

- > whether and how rights and interests can be “stapled” to digital bonds with the effect that holders would have direct rights against the issuer and can prevail over other third parties;
- > what the formalities are for the issuance and transfer of digital bonds; and
- > whether, in relation to Singapore incorporated companies, local corporate law requirements can be met for issuance and transfer of digital bonds.

Stapling

The purpose of stapling is to ensure that rights in respect of the token inherently form part of the token such that token holders obtain indefeasible rights upon issuance and on subsequent transfer of the token. The UKJT Paper⁸ describes stapling as referring to “*a legal mechanism whereby the holder of a legal right or interest in an asset is identified by reference to a cryptoasset, or to another digital object of property or a ledger record that is not itself an object of property (in the case of registered or similar structures)*”.

To put this in other words, in response to the question “*who can exercise rights in relation to a digital bond?*”, if rights are “stapled” to a bearer token, the answer would be that the controller of the token can exercise such rights. Conversely, if rights are “stapled” to a registered or claims token, the answer would be that you would look to the register or ledger to identify who can exercise such rights.⁹ It is evident that valid stapling is critical to both the constitution and tradability of digital bonds.

Transferability

The importance of ensuring that a digital bond is validly constituted or issued is also pertinent on transfer: upon transfer of a digital bond, the rights or interests associated with it should simultaneously and automatically be transferred without the need for further acts or formalities.

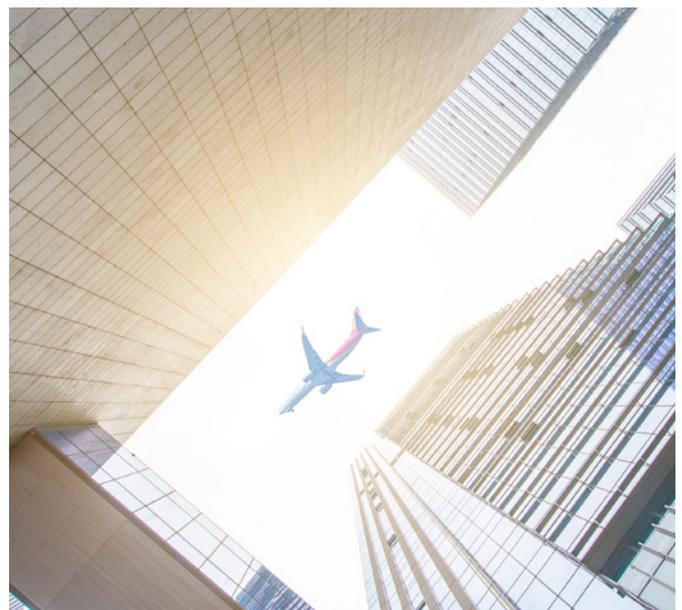
While there is a direct relationship between the issuer and the first holder of a digital bond, as between the issuer and

a subsequent transferee of the bond, there may not be any direct relationship and there is no privity of contract. A transferee will of course want to ensure that, by virtue of its control of the token, it can exercise rights against the issuer. From the perspective of the issuer, it will want to ensure that its obligations in respect of the digital bonds are fully discharged by payment to the holder, free from the assertion of claims by intervening holders.

Negotiability

Negotiability is key to the tradability of conventional bearer bonds as well as for the transfer of bearer tokens. As negotiable instruments, conventional bearer bonds, by virtue of mercantile custom,¹⁰ can be transferred by physical delivery without the need for a separate written document of transfer or notice to the issuer. Transferees also take the bonds free of any defects in the title of the transferor or of prior transferors, provided that this is consistent with the intention of the transferor and the transferee has taken the instrument in good faith for value and without notice of any previous defect in title. The question then becomes whether bearer tokens likewise have negotiable status.

As a common law jurisdiction, one should be able to arrive at the same conclusion under Singapore law as that under English law¹¹; namely, that there is no reason why a digital bearer token used to evidence title in a digital bond should be treated any differently from a paper instrument used to evidence title in a conventional bearer bond.



⁸ Paragraph 85 of the UKJT Paper as endorsed by the Law Commission in the Law Commission Report in footnote 854.

⁹ In practical terms, suitable drafting would be included in the terms and conditions to the effect that the person entitled to exercise rights and interests in respect of the token is determined by the ledger record or entry in the DLT-based system used to identify the holder of the tokens.

¹⁰ Paragraphs 53-54 of the UKJT Paper, citing *Edelstein v Schuler & Co* [1902] 2 KB 144.

¹¹ See paragraphs 53-54 of the UKJT Paper.

As bearer tokens are newly developed instruments, it is arguable that a mercantile custom granting bearer tokens a status of negotiability has yet to arise and so a bearer token cannot, properly speaking, currently be treated as “negotiable”. Nevertheless, we anticipate that the mercantile custom for bearer tokens will develop¹² so that bearer tokens can be treated as negotiable instruments in the debt capital markets in the near future and, if so, the common law will be receptive and give effect to that practice. Even in the absence of mercantile custom, as a bearer token is a contractual arrangement between the issuer and the holders,¹³ the legal effects of negotiability can be achieved by stapling the interests or rights onto the bearer token. It is apparent that stapling emulates the legal effect of negotiability via appropriate drafting and structuring.

Unlike bearer bonds (and bearer tokens), registered tokens and claims tokens are, by definition and in nature, not negotiable instruments. Nevertheless, this does not affect the transferability and tradability of registered and claims tokens. As discussed below, if rights are “stapled” to a ledger record or entry in a blockchain or DLT-based system evidencing title held by the holder of the registered or claims tokens, the person entitled to exercise rights in respect of the relevant token will be determined by the ledger record or entry used to identify the holder of the token.¹⁴

Stapling techniques in the context of bearer, registered and claims tokens

Stapling as a legal technique, applies to bearer tokens. By stapling the interests onto the bearer tokens, the tokens can be validly issued and transferred using a blockchain or DLT-based system.

Rights and interests can also be stapled onto registered tokens and claims tokens. Apart from stapling the rights or interests to the asset itself, the rights or interests can also be stapled to a ledger record or entry in a blockchain or DLT-based system evidencing title held by the holder of the tokens. From a practical perspective, this could be achieved by, for example, including suitable drafting to the effect that the person entitled to exercise rights and interests in respect of the token is determined by the ledger record or entry in the DLT-based system.

Various options discussed in the UKJT Paper can be used to staple legal rights to digital bonds under Singapore law, as follows:

- > deed poll;
- > third party rights legislation;
- > open offer;
- > advance consent to transfer by way of novation; or
- > use of a multilateral contractual framework.¹⁵

We discuss each of these stapling techniques in turn.

(i) Deed poll

A deed poll is a unilateral promise by the maker that can be enforced by a person without being a party to the deed, provided they are named or sufficiently identified as the person for whose benefit the promise is made. A deed poll is commonly used where a party to a transaction wishes to confer rights on one or more other parties but it is not practicable to have each of the other parties physically execute an agreement. In the debt capital markets, a deed poll is most commonly used to confer direct rights against the issuer upon the holder of the debt securities. The deed poll allows for suitable drafting of provisions reflecting parties’ intention thus providing contractual certainty.

In conventional bond issuances, in addition to the use of a deed poll, a trustee structure is also frequently used. Under a trustee structure, a third party trustee would hold the issuer’s promise to pay interest and to repay the bonds on trust for the bondholders. Any action to be taken under the bonds would be taken by the trustee on behalf of the bondholders and individual bondholders have no right to sue the issuer. Under this structure, an express trust should be created by way of a trust deed.

While it would be more convenient to have the relevant deed poll and trust deed executed electronically, this is not necessary if the securities are issued in digital form. For clarity, there is no legal impediment to a deed poll or a trust deed in respect of digital bonds to be executed in wet ink.



¹² The usage need not be of long standing, but it must have prevailed for a sufficiently long period in order to achieve certainty and notoriety. Thus, the courts may give effect to mercantile usage which establishes the validity of any new kinds of negotiable instruments. See Hugh Beale, *Chitty on Contracts* (34th Edition, 2022) at paragraph 36-005.

¹³ See paragraphs 55-57 of the UKJT Paper as endorsed by the Law Commission in the Law Commission Report at paragraph 8.12.

¹⁴ Paragraph 88 of the UKJT Paper.

¹⁵ Paragraph 88 of the UKJT Paper.

(ii) Third party rights

The UKJT paper proposes that a similar outcome can be achieved without the use of a deed poll, by virtue of the UK Contracts (Rights of Third Parties) Act 1999.¹⁶ Similarly, under Singapore law, the Contracts (Rights of Third Parties) Act 2001 of Singapore (the “**Third Party Rights Act**”), which is substantively similar to the UK legislation, confers a third party a right to enforce a term of a contract where (i) the contract expressly provides that the third party may do so; or (ii) the term purports to confer a benefit on the third party.¹⁷ In both situations, the third party must be expressly identified in the contract by name or as a member of a “class”.¹⁸ For practical purposes, this would mean that the terms of the applicable digital bonds should be carefully drafted to ensure that defined third party rights are conferred on a “class” of persons, namely each potential holder from time to time of the applicable digital bonds.

Lists of classes or terms of contracts, including “*negotiable instruments*” have been carved out from the application of the Third Party Rights Act.¹⁹ Bearer bonds are likely to be categorized as “*negotiable instruments*” under Singapore law and hence protection provided by the Third Party Rights Act may not apply to bearer tokens.²⁰ Nevertheless, subject to the judicial interpretation of “*negotiable instrument*”, third party protection may be applicable to registered tokens and claims tokens.

(iii) Open offer

Another stapling technique involves creating a direct contractual agreement between the issuer and each investor through an open offer made by the issuer. Under Singapore law, an issuer may offer to contract with any investor who agrees to a transaction on the basis of a set of pre-established terms of issue through the system. The terms of the issue would constitute a direct contractual relationship between the issuer and each investor. The terms could further be drafted to the effect that the issuer and each investor are released from their obligations to one another upon transfer of the digital bonds by the investor.

(iv) Advance consent to transfer by way of novation

Alternatively, interests could be stapled onto digital bonds by way of novation. Upon novation, rights and obligations pursuant to the terms of the digital bonds are extinguished between the issuer and the transferor and a new contract between the issuer and the transferee will be created on the same terms (except, of course, as to the parties). This stapling mechanism is the same principle frequently adopted in syndicated loan transactions in governing the relationship between each of the syndicated lender banks and the borrower, where an original lender party to the loan agreement may transfer by novation its rights

and obligations under the loan agreement to a syndicate lender without consent of the borrower or other parties to the loan agreement on the basis that the borrower and other parties to the agreement had pre-consented to such future transfer by novation provided certain conditions are fulfilled.

(v) Multilateral contractual framework

Another method of stapling rights onto digital bonds is through a multilateral contractual framework established between the issuer, any third-party operator and all of the investors. A multilateral contractual framework is also called “network rules” in the market. The common law analysis in the UKJT Paper²¹ equally applies to Singapore.

The advantage of having a framework of network rules is that it does not require a new contract to be executed by all parties each time a new investor joins the system. Instead, a contractual relationship may arise between investors who each agree to be bound even where they do not know each other’s identity and therefore investors would have rights as against each other. By allowing the parties to agree a bespoke set of rules applicable to transfers within the system, the network rules could be structured so that certain protections are granted to innocent acquirers in respect of non-negotiable instruments. This is particularly relevant for financial market infrastructures (“**FMs**”) (including but not limited to payment systems and central securities depositories).

Although a contractual arrangement cannot bind third parties or prevent them from acquiring proprietary interests in contravention of the network rules, the network rules may provide for the transfer of interests between participants in the network which will be effective against third parties. Where the interests are in digital securities that have been immobilised in connection with the network rules, the network rules may include protections to prevent transfers to third parties outside the network to detriment the interests of participants. We believe careful drafting of the network rules would permit the stapling of interests onto the digital bonds.

¹⁶ Paragraphs 93 – 100 of the UKJT Paper.

¹⁷ Section 2(1), Third Party Rights Act.

¹⁸ Section 2(3), Third Party Rights Act.

¹⁹ Section 7, Third Party Rights Act.

²⁰ However, as discussed in the previous section, if such bearer tokens are considered negotiable instruments, there should be no risk that the bond would be decoupled from the token and the lack of protection from the Third Party Rights Act would be immaterial.

²¹ Paragraphs 111 – 117 of the UKJT Paper.



Singapore law potentially provides several mechanisms that can be used for stapling legal interests onto digital bonds. It is generally possible to structure arrangements using any of the above mechanisms so as to ensure that future purchasers are in practice protected against the risk of the issuer revoking or amending its obligations. Nevertheless, these methods do not negate against all potential risks, for example in the case where two investors claim legal title to the same digital bond with the first investor claiming to have been wrongfully deprived of the digital bond. The Third Party Rights Act provides that in the case of competing interests among various third parties, the enforcement of a contractual term by a third party is subject to any relevant conditions as provided under the contract. The onus is therefore on the contracting parties to formulate terms of the contract to cater for the possibility of competing interests among third-party investors.²² This could be, for example, by providing for a method of determining the rightful holder in the terms and conditions or setting out dispute resolution terms in the case of competing interests.

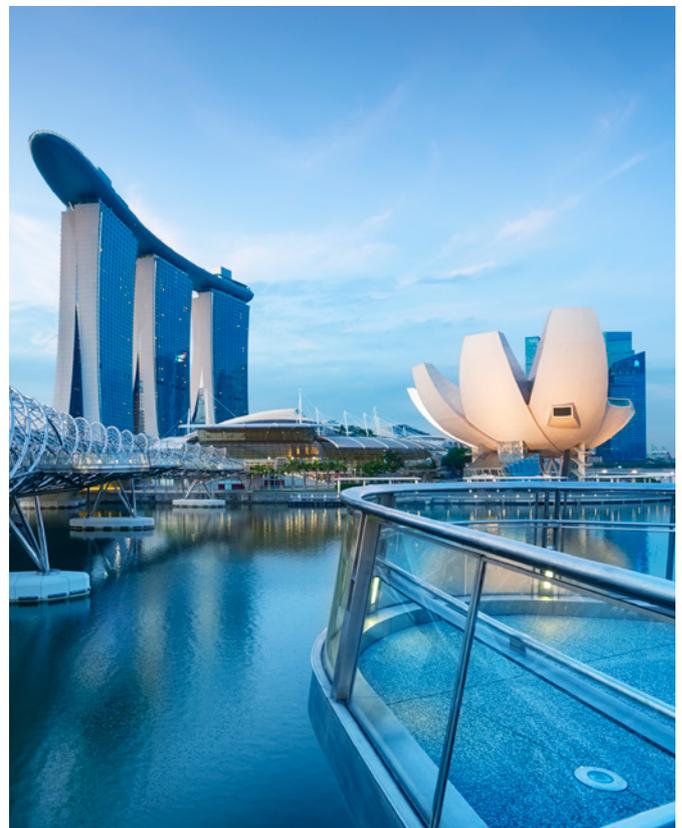
Among the five stapling techniques, as discussed above, the deed poll and trust deed are regarded as the most resilient methods in the debt capital markets as parties' intention can be clearly elaborated by suitable drafting in the provisions of the deed poll or trust deed and is most frequently used. Apart from the usage of a deed poll or trust deed, multilateral rules are also commonly used in the market to govern the relationship between different parties. In appropriate cases, hybrids of the various stapling mechanisms (for example, a combination of deed poll and network rules in FMIs) may be adopted for the issuance and transfer of digital bonds.

Practical structuring considerations

In light of the issues above, when preparing the terms and conditions of digital bonds, parties will need to:

- > ensure that the contractual terms that confer rights on holders of the digital bonds are clearly drafted and unambiguous;
- > clearly provide that the holders of digital bonds are to be identified by reference to the digital ledger or blockchain; and
- > include provisions in the terms and conditions to resolve competing interests among holders of digital bonds, for example provisions to the effect that the relevant transfer shall confer upon the transferee all rights and benefits and that the holder is entitled as against all previous holders, to rights against the digital bonds.

In addition, parties will want to think about including appropriate risk disclosures for digital bond offerings and how best to mitigate issuer risk using such disclosures. Issuers will also want to carefully consider their target investor base. The digital nature of the issuance will in practice mean that the risk profile of the digital bond will suit professional investors but this does not preclude that a digital bond might be inherently suitable for retail investors by virtue of its terms and conditions. In fact, local securities and investor protections regulations may mean that the digital bond market may also open to retail investors so long as selling restrictions and risk disclosures provisions are considered carefully.



²² Section 2(4) of the Third Party Rights Act.

Formalities

Under Singapore law, there are no specific formalities requirements for the issuance and transfer of digital bonds. However, it is worth noting certain formalities requirements in respect of (i) a disposition of an equitable interest in the context of digital bonds and (ii) the execution of a Singapore law governed deed poll or trust deed.

(i) Disposition of equity interest

The notion of a disposition of equitable interest is relevant where some forms of intermediated digital bonds are held on trust or where the securities are proprietary in nature. In the UK, a disposition of equitable interests or trusts subsisting at the time of disposition must be in writing and signed.²³ This requirement is likewise present in Singapore law.²⁴ The Singapore requirement is consistent with that in the UK where such requirement “does not affect the creation or operation of resulting, implied or constructive trusts”.²⁵ The analysis in the UKJT Paper on how a failure to meet the requirement could be remedied by a finding of constructive trust is also applicable to Singapore law.²⁶ Further, as will be discussed in more detail in the next section, the Singapore courts have also been receptive to supporting the view that emails and electronic records satisfy the requirement for writing for certain sections of the Civil Law Act 1909 of Singapore.²⁷ While there has been no direct case law on Section 7(2) of the Civil Law Act 1909 of Singapore, there is support for the requirement for writing and signature to be satisfied by electronic records. Appropriate legal structuring and platform design techniques should be employed to comply with the requirements laid out in Section 7(2) of the Civil Law Act 1909 of Singapore.

(ii) Execution of a Singapore law governed deed poll or trust deed

There are also certain formalities requirements for the execution of a deed poll and trust deed under Singapore law. Deeds are required to be “signed, sealed and delivered”²⁸ and must be in writing on paper or parchment. The last requirement for deeds to be *in writing on paper or parchment* is referred to as the “substance requirement” (ie, the requirement relates to the substance in which a deed is written on, not merely a requirement for a deed to be in writing).

In the UK, the substance requirement for deeds was abolished by the Law of Property (Miscellaneous Provisions) Act 1989. However, there is no equivalent statutory provision in Singapore expressly abolishing the substance requirement, despite proposals for its abolishment in earlier law reform reports.²⁹ Notwithstanding, there has been case law in Singapore supporting the view that emails and electronic records satisfy the requirement for writing for certain sections of the Civil Law Act 1909 of Singapore.³⁰ The Interpretation Act 1965 of Singapore further provides that “writing” and expressions referring to writing include printing, lithography, typewriting, photography and other modes of representing or reproducing words or figures in visible form. Further, there have been developments in other areas of Singapore law to allow electronic execution of other documents where traditionally it has been deemed imperative to require hardcopy documents, such as (i) statutory declarations, oaths and affirmations,³¹ (ii) nominations of insurance beneficiaries³² and (iii) lasting powers of attorney.³³ Therefore, although the substance requirement has not been formally abolished, Singapore law has demonstrated that it is sufficiently flexible to accommodate developments in technology which supports the position that the substance requirement can be met in the context of a deed poll recorded on a blockchain or on DLT and which is executed by a Singapore incorporated company.

23 Section 53(1)(c) of the Law of Property Act 1925.

24 Section 7(2) of the Civil Law Act 1909 of Singapore.

25 Section 7(3) of the Civil Law Act 1909 of Singapore.

26 Paragraphs 120 – 127 of the UKJT Paper.

27 *SM Integrated Transware Pte Ltd v Schenker Singapore (Pte) Ltd* [2005] SGHC 58 and *Joseph Mathew and another v Singh Chiranjeev and another* [2009] SGCA 51 support the view that emails and electronic records satisfied the requirement for writing for purposes of section 6(d) of the Civil Law Act 1909 of Singapore. *Metupalle Vasanthan v Loganathan Ravishankar* [2021] SGHC 238 takes the same view with respect to section 4(8), Civil Law Act 1909 of Singapore.

28 A Singapore company executing a Singapore law deed would have to do so by affixing its Common Seal (following the requirements of its constitution relating to the use of the Common Seal), or executed pursuant to Section 41B(1) of the Companies Act by the counter signature of two directors, a director and the company secretary, or a director and a witness. A foreign company executing a Singapore law deed would typically do so by its attorney under the attorney’s seal relying on Sections 41(5) and 41(7) of the Companies Act.

29 See the Report on the Proposed Instruments (Formalities) Bill 2001 (accessible at <https://www.agc.gov.sg/resources/publications>) and the Supplementary Report on Formalities in the Execution of Documents: Amendments to Companies Act and Limited Liability Partnerships Act in 2010 (accessible at https://www.agc.gov.sg-admin.cwp.sg/docs/default-source/publications/law-reform-reports/2010_supplementary-report-on-formalities-in-the-execution-of-documents-amendments-to-companies-act-and-limited-liability-partnerships-act.pdf).

30 *SM Integrated Transware Pte Ltd v Schenker Singapore (Pte) Ltd* [2005] SGHC 58 and *Joseph Mathew and another v Singh Chiranjeev and another* [2009] SGCA 51 support the view that emails and electronic records satisfied the requirement for writing for purposes of section 6(d) of the Civil Law Act 1909 of Singapore. *Metupalle Vasanthan v Loganathan Ravishankar* [2021] SGHC 238 takes the same view with respect to section 4(8), Civil Law Act 1909 of Singapore.

31 The Singapore Parliament passed the Constitution of the Republic of Singapore Bill and the Oaths, Declarations and Notarisations (Remote Methods) Bill on 2 August 2023 to facilitate such electronic transactions. See also <https://www.mlaw.gov.sg/news/press-releases/legislative-amendments-electronic-declarations-oaths-affirmations-notarisations/>.

32 The Monetary Authority of Singapore announced that insurance policy owners would have online options to nominate beneficiaries instead of requiring hardcopy submissions with in-person witnessing on 26 July 2023. Such options would be available from 2 January 2024, and the Insurance (Nomination of Beneficiaries) Regulations 2009 were amended. See also <https://www.mas.gov.sg/news/media-releases/2023/mas-enables-online-nomination-of-insurance-beneficiaries>.

33 The Mental Capacity Act 2008 was amended in July 2021 to enable the making of lasting powers of attorney electronically. See in particular Section 12A of the Mental Capacity Act 2008. See also <https://www.msf.gov.sg/media-room/article/Proposed-Amendments-to-Mental-Capacity-Act-to-Enable-Lasting-Power-of-Attorney-to-be-Made-Electronically>.

While the writing and signature for the deed can be in electronic form, it is conceivable that delivery of the deed can also be satisfied by recording the relevant delivery on the blockchain ledger.

Witnessing requirements may add complexity, but are not insurmountable, for electronic execution of a deed poll. In Singapore, while there is no statutory requirement for the execution of deeds generally to be witnessed, witnessing is a common practice for evidential purposes. In addition, a witnessing requirement may be additionally prescribed in the constitution of some Singapore companies, or if the deed is to be executed by a director in the presence of a witness who attests the signature following section 41B(1) (c) of the Companies Act.

In the context of a Singapore law governed deed poll or trust deed generally (that may also be executed by a non-Singapore company), under the Electronic Transactions Act 2010 of Singapore (the “ETA”), recognition of an electronic signature is provided for when certain criteria are met, including the proper identification of the signatory, the intention of the signatory in respect to the electronic record, reliability of the purpose for which the electronic record was generated, and satisfactory evidential records of such criteria.³⁴ These evidentiary presumptions do not apply to a list of excluded documents³⁵ which include indentures, powers of attorney and declarations of trust, which are common transaction documents in a securities issue (eg the trust deed in a bond issue with a trustee structure is the document that constitutes the bonds).³⁶

Although the excluded documents do not get the benefit of various evidentiary presumptions in the ETA, the ETA does not prohibit them from being signed electronically. The courts have confirmed on several occasions that requirements for documents to be “in writing” or “signed” could still be satisfied upon application of common law principles in the context of documents on the list of excluded documents.³⁷ Therefore, indentures, powers of attorney and declarations of trust that are often included as part of the transaction documentation of securities which may still be signed electronically, notwithstanding their inclusion in the First Schedule of the ETA, by relying on common law.

Having said that, we note that there has not been widespread adoption of electronic signatures in the conventional bond market. For example, in the international bond market, the adoption of electronic signatures may still be an issue in certain jurisdictions. Consideration must also be given to any specific local law requirements of the jurisdiction of incorporation of non-Singapore counter parties, which may present a separate set of challenges in the form of additional formalities requirements to be adhered to.

As discussed earlier, there is no legal impediment for a deed poll or a trust deed in respect of digital securities to be executed in wet-ink signature, and that might very well be the best solution forward in current circumstances (where a deed poll or trust deed is required in the first place).

Local corporate law requirements

A Singapore-incorporated company that wishes to issue and/or transfer digital bonds, regardless of whether the choice of law of the relevant contract is Singapore law or other law, will need to consider the corporate law requirements under the local legislation, ie the Companies Act.

Under the current legislation in Singapore, there are three main corporate law considerations with respect to the issuance and transfer of digital bonds, namely:

- > whether physical certificates are necessary for digital bonds;
- > whether a blockchain or DLT-system can be used as a register of digital bonds; and
- > whether physical instruments of transfer are necessary for digital bonds.

³⁴ Section 8, ETA.

³⁵ First Schedule, ETA.

³⁶ Notably in Singapore, the ETA was amended in 2021 to adopt the UNCITRAL Model Law on Electronic Transferable Records. Under Section 16E of the ETA, an electronic transferable record is not to be denied legal effect or validity solely on the ground that it is in the form of an electronic record. The scope of such electronic transferable records includes documents that allow the holder to claim performance of an obligation stated on the document and transfer the right to performance of such obligation through transferring the document. It expressly includes bills of exchange, promissory notes and bills of lading. There are various requirements to be met in respect of the electronic transferable records which are set out in Part 2 of the ETA. The position remains open as to whether bearer bonds could be considered to be in scope of this new section and thus availed the application of the provisions of the ETA.

³⁷ In *SM Integrated Transware Pte Ltd v. Schenker Singapore (Pte) Ltd* [2005] 2 SLR(R) 651; [2005] SGHC 58 (accessible at: https://www.elitigation.sg/gd/s/2005_SGHC_58), the issue in dispute was whether an agreement for a lease (ie a contract for the disposition of an interest in immovable property) that was concluded through the exchange of e-mail correspondence between the parties satisfied the requirements for writing and signature under section 6(d) of the Civil Law Act 1909. Given that a contract for the disposition of an interest in immovable property (such as the agreement for a lease in question) was listed in the First Schedule to the ETA, Part II of the ETA did not apply and hence could not be relied upon to fulfil the requirements under section 6(d) for such a contract to be “in writing” and “signed”. On the facts of the case, however, the court ruled that under common law, the e-mail correspondence between the parties could fulfil the requirements for writing and signature under section 6(d) of the Civil Law Act of “in writing” and “signed”, and therefore an enforceable lease agreement was formed. This has also been cited with approval by the Singapore Court of Appeal in *Joseph Mathew and another v Singh Chiranjeev and another* [2010] 1 SLR 33 8; [2009] SGCA 51 (accessible at: https://www.elitigation.sg/gdviewer/s/2009_SGCA_51).

(i) Certificate for debentures

There is no requirement for a certificate to be issued for allotment or transfer of debentures under English law.³⁸ This position is contrasted in Singapore where a Singapore company is required to complete and have ready for delivery all appropriate certificates and debentures within 60 days after the allotment of any of its shares or debentures, or within 30 days after the date of a transfer of the same.³⁹

We note that historically market convention has been to adopt certificates of debentures (whether in global or definitive form) and specific requirements are usually governed by the transaction documents constituting such debentures. While there is no express restriction that share certificates or any certificates of debentures have to be in paper form, Section 130AE(1) and (2) of the Companies Act, for public and private companies respectively, which requires a company to “complete and have ready for delivery all the appropriate certificates and debentures”, have been read by the Companies Act Working Group⁴⁰ in 2019 to refer to physical share certificates (in the context of the section’s reference to share certificates). While the Accounting and Corporate Regulatory Authority of Singapore launched a public consultation on proposed amendments to the Companies Act on 20 July 2020, *inter alia*, introducing an enabling provision which states that companies are not required to have physical share certificates, consultation conclusions on this particular issue have yet to be released.⁴¹

Proper consideration about structuring and product design of the blockchain or DLT platforms would have to be made to comply with the statutory restrictions in the Companies Act. Proposals such as (i) doing away with a requirement for certificates of debentures to be issued altogether, where instead such digital bonds are directly issued on the blockchain or DLT or (ii) having a certificate of debentures to be issued on the blockchain or DLT, would have to be fitted in the overarching requirement that the Singapore company would have to “complete and have ready for delivery all the appropriate certificates and debentures in connection with the allotment or transfer”⁴² and this could manifest in having algorithms or platform processes available to, for instance, generate such physical certificates when needed to comply with the requirement.

(ii) Register of debenture holders

On registers of debentures, similar to the UK position,⁴³ a Singapore company issuing registered bonds is required to keep a register of debenture holders at the registered office of the company or at some other place in Singapore⁴⁴. Our view is that, subject to the satisfaction of the below considerations, it is possible for a blockchain or DLT-based system to serve as a register of debenture holders. Further, we would recommend that transaction documentation clearly state the location of the node and/or hardware that represents the debenture ledger which is intended to form the register of debenture holders, so as to comply with the above-mentioned requirement that such debenture register is kept at the registered office of the company or at some other place in Singapore. For clarity, the discussion in this sub-section is not relevant to bearer tokens as the holders of bearer tokens are not required to keep a register under Singapore law.

As a starting point, there is express statutory recognition in Singapore law that such register can be kept in electronic form⁴⁵ which should help the argument for the register to be maintained on the blockchain or DLT. Nevertheless, the UKJT paper proposes that there are three criteria which the blockchain must satisfy in order to serve as a register of debenture holders. Our view is that all three requirements can be met in Singapore.

First, where company records are kept in electronic form, they “must be capable of being produced in hard copy form”.⁴⁶ Provided that hard copies of the data contained in the register can be produced by the particular system, this condition can be met.

Second, a register of debenture holders needs to contain certain specific details of information, for example, names and addresses of debenture holders.⁴⁷ While it is clear that the platform system would need to be able to record the details, there is no express statutory requirement that such details must be stored on-chain. The design of the system would need to accommodate the inclusion of this data either on or off chain.

38 Section 739(2) of the Companies Act 2006.

39 Section 130AE(1) and (2) of the Companies Act.

40 The Companies Act Working Group was appointed by the Accounting and Corporate Regulatory Authority in January 2018 to undertake a focused review of the Companies Act with the aim of promoting a more pro-business environment whilst upholding market confidence and safeguarding public interest. The working group released a report dated 15 May 2019 following their review, which was followed by a public consultation on proposed amendments to the Companies Act launched by the Accounting and Corporate Regulatory Authority on 20 July 2020.

41 Some other issues covered by the same consultation have been addressed and implemented.

42 Section 130AE(1) and (2) of the Companies Act.

43 Section 743 of the Companies Act 2006.

44 Under Sections 93(1), 93(2) and 93(3) of the Companies Act, an issuer of debentures is required to keep a register of holders of debentures (the “**Debentures Register**”) at the registered office of the company or at some other place in Singapore. The Debentures Register must contain the names and addresses of the debenture holders and the amount of debentures held by them. The place at which the Debentures Register is kept and any changes to its location must be lodged with the Companies Registrar. The two requirements set out expressly in Sections 93(1) and 93(3) of the Companies Act are: (a) the Debentures Register must be kept in Singapore, and (b) the Debentures Register must contain the names and addresses of the debenture holders and the amount of debentures held by them.

45 Section 395 of the Companies Act provides that company records may be “kept in hard copy form or in electronic form” and “if company records are kept in electronic form, the company must ensure that they are capable of being reproduced in hard copy form”, and ““company record” means any register, index, minute book, accounting record, minute or other document required by this Act to be kept by a company”.

46 Section 395(3) of the Companies Act.

47 Section 93(3) of the Companies Act.

Third, the company issuing debentures is obliged to retain a degree of control over the register to fulfil its maintenance obligations under the legislation. We wish to flag this condition as this may be where the distinction between a permissioned blockchain and a permissionless blockchain is drawn. Comparable to the English law, certain maintenance obligations in respect of a register of debenture holders are stipulated under Singapore law, including:

- > a duty to register certain transfers of debentures;⁴⁸
- > the right to refuse to register certain transfers of debentures;⁴⁹ and
- > offences relating to false and misleading statements.⁵⁰

Accordingly, whether a blockchain can be used as a register of debenture holders would depend on whether the issuer has sufficient control over the register to fulfil its duties of maintenance. As such, a permissioned or off-chain system would be able to satisfy the requirements. It then raises an important question of whether an on-chain register on a public blockchain could fulfil the requirements with respect to the statutory obligations of maintenance.

One way is that the issuer retains the ultimate control of the register by owning a special private “master” key to the public blockchain. The issuer may then use the key to register or to refuse certain transfers of debentures as well as taking adequate precautions to guard against falsification of entries and taking steps to facilitate discovery of the falsification. Another method, which is more commonly used, is that control over the on-chain register may be conferred on the issuer by “whitelisting”. The persons who are whitelisted may be limited to the issuer, its affiliates and its agents to the effect that control over the register is still retained by the issuer.

(iii) Instrument of transfer of debentures

As with English law,⁵¹ a “proper instrument of transfer” is required for registration of transfer of debentures of a Singapore-incorporated company under Singapore law⁵².

Registration of transfer of debentures, however, is not always necessary to effect a transfer of legal title given this will depend on the nature of the security transferred. For example, if the subject matter of the transfer is bearer bonds, discussion of registration is no longer relevant. In any event, an instrument of transfer is not commonly used for transfer of debt securities in the current market where a single global certificate is issued and transfers of beneficial interests are effected in over-the-counter markets. This perhaps explains why there are very few, if any, Singapore cases and practice guides published by the Inland Revenue Authority of Singapore interpreting what amounts to a “proper instrument of transfer”.

At common law, a “proper instrument of transfer” for registered debt securities in the context of a blockchain or DLT-based system under Singapore law is not defined and generally may refer to any document: (1) which can be delivered to the company and, if necessary, submitted to the stamp office; (2) which by its terms operates to transfer an interest in property; and (3) which is executed and dated.⁵³ Under Singapore law, a blockchain or DLT-based system could be paired with software to produce a document satisfying the above three requirements of a “proper instrument of transfer”.

For completeness, the above corporate law requirements do not apply to the transfer of debentures of non-Singapore incorporated companies. Therefore, even where the governing law of the relevant transaction of digital bonds is Singapore law and the issuer has a place of business in Singapore, the corporate law requirements under the Companies Act are not applicable to the transaction if the issuer is not a Singapore-incorporated company.

Based on the above, our view is that the key legal issues in relation to issuance and transfer of digital bonds, namely, (i) issuance, (ii) negotiability, (iii) stapling, (iv) formalities and (v) local corporate law requirements, are sufficiently considered and addressed under existing Singapore law. We are confident that Singapore law is inherently flexible and resilient to accommodate the issuance and transfer of digital bonds in the current capital markets, although as pointed out above, there are still certain restrictive formalities under Singapore law (eg the need for debenture certificates, availability of the debenture register etc.) which may benefit from targeted and limited law reform. We further note that digital shares in Singapore companies raise a number of other specific questions relating to corporate requirements imposed by the Companies Act,⁵⁴ and these are beyond the scope of this paper, but would also benefit from such targeted and limited law reform.

48 Sections 128 and 130AA of the Companies Act.

49 Sections 129 and 130AB of the Companies Act.

50 Section 401 of Companies Act.

51 Section 770(1) of the Companies Act 2006.

52 Sections 127 and 130 of Companies Act.

53 Paragraph 166 of the UKJT Paper.

54 For example, DLT and blockchain platforms face certain limitations in replicating processes to cater for directors’ discretion to approve a share transfer – where Section 18(1) of the Companies Act requires that the constitution of a private company must contain a provision which restricts the right to transfer its shares.



Specific questions

Q Can digital bonds be validly issued under Singapore law?

A Yes, it is possible for digital bonds to be issued using a blockchain or a DLT-based system under Singapore law. The features of conventional bonds can be replicated for digital bonds by adopting appropriate legal structuring and platform design techniques to comply with certain restrictive formalities discussed earlier under Singapore law (eg the need for debenture certificates, availability of the debenture register etc.).

Q In what legal form(s) are digital bonds capable of being issued under Singapore law?

A Digital bonds are capable of being issued by issuing bearer tokens, registered tokens or claims tokens. In the case of bearer tokens, rights or interests can be stapled to the token and passed with control of the token. For registered tokens, rights or interests can be stapled to the token through the update of a register maintained by or on behalf of the issuer under the conventional registered model. Claims tokens are similar to registered tokens but the register is maintained by a third party which is not an agent of the issuer. Although directly issued claims tokens would currently pose design and structuring issues for a Singapore incorporated company, there would be no issues with the claims model under an immobilization structure where the tokens are registered in the name of the custodian or depository.

Q Can a blockchain or DLT-based system be used as a register of digital bonds under Singapore law?

A Potentially yes. A blockchain is a database and may be used as a register similar to any other database. In particular, an on-chain ledger may be used as a register of a Singapore company so long as the company has retained sufficient control over the register to comply with its maintenance obligations under the legislation, and is structured in a way to ensure compliance with certain restrictive formalities as discussed above under Singapore law (such as having transaction documents clearly state the location of the node and/or hardware that represents the debenture ledger which is intended to form the register of debenture holders).

Q By which mechanisms can rights and interests be legally stapled to digital bonds in order to validly constitute a digital bond under Singapore law?

A The use of a deed poll (including a trust deed), the Third Party Rights Act, open offer, advance consent to transfer by way of novation and a multilateral contractual framework are examples of mechanisms that can be used to staple rights and interests to digital bonds or other entry in a blockchain or DLT-based system. Which mechanism to adopt would depend on the particular use case.

Q Are digital bonds capable of having the effects of a negotiable instrument under Singapore law?

A Bearer tokens may be considered negotiable through development of a mercantile custom to that effect in due course. Registered tokens and claims tokens are not negotiable. The practical effects of negotiability can also be emulated through the legal structuring techniques as discussed above.

Q By which mechanism are rights to digital bonds capable of being transferred under Singapore law?

A There are various transfer mechanisms, including but not limited to transfer by way of “negotiation” (ie where the digital bonds are granted the status of negotiability), legal assignment, novation and equitable assignment. The precise mechanism will depend on the nature of the digital bonds and the stapling mechanisms used.

As for traditional negotiable instruments, negotiable digital bonds are transferred by way of “negotiation”. In relation to non-negotiable digital bonds, such transfers may be made pursuant to the transfer mechanism provided for in the terms and conditions of such digital bonds, and conclusively reflected on the register of debenture holders.

Q Can the corporate law requirements be met by issuance and transfer of digital bonds under Singapore law?

A Potentially yes, if the transaction structure and platform design have been moulded to comply with certain restrictive formalities as discussed above under Singapore law (eg the need for debenture certificates, availability of the debenture register etc.). For debenture certificates, this could manifest in having algorithms or platform processes available to, for instance, generate such physical certificates when needed to comply with the requirement. Regarding requirements for a register of digital bonds, please refer to our responses in relation to whether a blockchain or DLT-based system be used as a register of digital bonds under Singapore law.



Final remarks

This paper seeks to provide an overview of potential legal considerations for the issuance and transfer of digital bonds under Singapore law. Based on the discussions in this paper, we believe that private law in Singapore is sufficiently flexible and resilient to accommodate novel asset classes to serve the needs of market participants.

Although this paper focuses on discussing debt securities, the analysis and legal structuring techniques are generally applicable to other contractual securities including but not limited to structured notes, repackaging, securitization and funds. In Singapore for example, there have been tokens issued with a fund as the underlying asset. Such tokens have been structured with a pass-through to the fund units where the commercial terms of the tokens mirror the equivalent commercial terms of the units. Structuring considerations include ensuring that distributions pass-through from the unit holder to the token holder on record, ensuring that the distribution and maturity dates of the token work when having regard to the equivalent dates of the fund, whether similar voting and redemption rights should be given to token holders and various other considerations. We note that some other asset classes such as equity⁵⁵ and real estate may face more difficulties with their issuance and transfer in tokenised forms. For example, practical difficulties arise from the very nature of a real estate property, where it is difficult to break up real estate property into individual tokenised portions or where it may be difficult to transfer or sell such real estate property. Having said that, with the right structure and design, it may still be possible to structure tokens with a real estate property as the underlying asset. We anticipate further clarity or law reform to address other assets classes in tokenisation of financial markets.

Apart from the legal issues discussed in this paper, we note that there are still some potential issues to be considered in the context of digital bonds. For example, given the global nature of digital bonds and the securities market, parties may need to deal with conflict of laws issues to determine which national laws apply to various aspects of collateral arrangements of digital bonds. Parties may also wish to consider the approach for manifesting and transferring digital bonds such that they are interoperable between different applications using the blockchain system.

As a leading financial centre, the platform has already been set for Singapore to play a leading role in the global development of digital bonds. We look forward to supporting and developing this space with clients and stakeholders, and to pushing forward tokenisation of other asset classes.

For the avoidance of doubt, this paper does not represent any legal opinion provided by Linklaters and the application of the law discussed herein is highly fact-sensitive and should be assessed on a case-by-case basis.

This paper does not cover matters of taxation, criminal law, partnership law, data protection, intellectual property, consumer protection, settlement finality, regulatory capital, anti-money laundering or counter-terrorist financing. Licensing issues have been excluded as these are issues particular to individual market participants. This paper also does not address the entire regulatory regime associated with issuing and dealing in securities nor issues relating to choice of law or private international law.

Given the application of law in the context of tokenisation is highly fact-sensitive, this paper does not set out every potential factual scenario which would need to be considered for the issuance and/or transfer of digital bonds. This paper is not intended to represent any legal opinion or advice, and readers should assess each factual scenario on a case-by-case basis.



⁵⁵ Such as the restriction alluded earlier, in relation to DLT's limitations in replicating processes to cater for directors' discretion to approve a share transfer.



Appendix 1: Case law on Digital Securities in Singapore

There have been a number of cases in Singapore that have ruled on certain aspects of digital assets. Some of these early positions have been referred to positively in other common law jurisdictions.

*Quoine Pte Ltd v B2C2 Ltd*¹

In 2019, the Singapore International Commercial Court in *B2C2 Ltd v Quoine Pte Ltd*² laid the groundwork for the proposition that digital assets may be recognized as property, indicating that it was possible for cryptocurrencies (Bitcoin was the cryptocurrency in question in that case) to be held on trust. While on appeal, in *Quoine Pte Ltd v B2C2 Ltd*,³ the court ultimately reasoned that it was unnecessary to consider the substantive question of whether cryptocurrencies could be treated as property, the court nevertheless canvassed in detail authorities in support of treating cryptocurrencies as property and left open the possibility that digital assets may be recognized as property.⁴

*CLM v CLN*⁵

In *CLM v CLN*, Lee Seiu Kin J (sitting in the Singapore High Court) dealt with the matter more directly, in the context of an interlocutory application for, *inter alia*, a proprietary injunction prohibiting the disposition of, or diminishing the value of certain alleged stolen cryptocurrency assets (Bitcoin and Ethereum in this case). In considering whether there was a “serious question to be tried” in the context of the interlocutory proprietary injunction, Lee Seiu Kin J considered if the alleged stolen cryptocurrency assets, were capable of giving rise to proprietary rights which could be protected via a proprietary injunction. Lee Seiu Kin J considered the four requirements laid out in the classic definition of a property right in *Ainsworth*,⁶ and the New Zealand High Court’s examination of the four requirements in the context of cryptocurrencies in *Ruscoe v Cryptopia Ltd (in liq)*.⁷ Lee Seiu Kin J held that cryptocurrencies satisfied the definition of a property right based on the *Ainsworth* requirements, and that there was a serious question to be tried.

*Janesh s/o Rajkumar v Unknown Person (“CHEFPIERRE”)*⁸

A similar case arose shortly thereafter in *Janesh s/o Rajkumar v Unknown Person (“CHEFPIERRE”)*, where like in *CLM v CLN*, it involved an interlocutory application for, *inter alia*, a proprietary injunction prohibiting dealings with a specific NFT until after the trial of the main civil suit. Similar to *CLM v CLN*, Lee Seiu Kin J (sitting in the Singapore High Court) considered whether NFTs in general were capable of giving rise to proprietary rights which could be protected by an injunction. The analysis

in *CLM v CLN* was referred to, affirming the position that NFTs shared certain practical features of property (as elaborated in the *Ainsworth* criteria), including that it was capable of isolation, and had a degree of permanence. However, Lee Seiu Kin J also recognized an underlying difficulty with categorising the proprietary nature of a crypto asset, ie it does not fall within the two traditional types of property recognized in common law, being (A) tangible property such as a physical artwork and (B) choses in action such as a debt (though noted that intellectual property is a statutory creation with a unique framework). Nevertheless, with the application being interlocutory in nature, an in-depth analysis of the underlying concepts involved was not undertaken. Lee Seiu Kin J held that there was a serious question to be tried and that the NFT was capable of giving rise to proprietary rights which could be protected by an injunction.

*ByBit Fintech Ltd v Ho Kai Xin*⁹

The Singapore High Court had the opportunity to consider the notion of whether stablecoins (United States Dollar Tether in this case) could be considered property capable of being held on trust in a summary judgment in *ByBit Fintech Ltd v Ho Kai Xin*. After a survey of commentary and case law on the topic, Philip Jeyaretnam J concluded that “the holder of a crypto asset has in principle an incorporeal right of property recognizable by the common law as a thing in action and so enforceable in court”,¹⁰ though not without conceding that the conclusion has “an element of circularity”¹¹ but ultimately indicating that such reasoning is “not strikingly different from how the law approaches other social constructs, such as money”.¹² This case adds further judicial support for the proposition that digital assets may be recognized as property, taking the analysis one step further from prior cases (which hitherto focussed on whether there was a serious question to be tried) to a summary evaluation of the merits of the claim for a summary judgment. However, it is noteworthy that the defendants in this case were unrepresented and this judgment is ultimately interlocutory in nature. There will no doubt be further future developments in case law on this proposition.

These cases clearly indicate that there has been increasing judicial acceptance that digital assets can be recognized as property, and pave the way for continued development and adoption of DLT in the issuance and transfer of digital securities in Singapore.

Endnotes

- ¹ [2020] 2 SLR 20; [2020] SGCA(I) 02. Accessible at: <https://www.sicc.gov.sg/docs/default-source/modules-document/judgments/quoise-pte-ltd-v-b2c2-ltd.pdf>.
- ² [2019] 4 SLR 17; [2019] SGHC(I) 03. Accessible at <https://www.sicc.gov.sg/docs/default-source/modules-document/judgments/b2c2-ltd-v-quoise-pte-ltd.pdf>.
- ³ [2020] 2 SLR 20; [2020] SGCA(I) 02. Accessible at: <https://www.sicc.gov.sg/docs/default-source/modules-document/judgments/quoise-pte-ltd-v-b2c2-ltd.pdf>.
- ⁴ [2020] 2 SLR 20 at [144]. It was held that “[t]here may be much to commend the view that cryptocurrencies should be capable of assimilation into the general concepts of property”.
- ⁵ [2022] SGHC 46. Accessible at: https://www.elitigation.sg/gd/s/2022_SGHC_46.
- ⁶ [1965] AC 1175. At 1248, it was held that “[I]t must be definable, identifiable by third parties, capable in its nature of assumption by third parties, and have some degree of permanence or stability”.
- ⁷ [2020] 2 NZLR 809.
- ⁸ [2022] SGHC 264. Accessible at: https://www.elitigation.sg/gd/s/2022_SGHC_264.
- ⁹ [2023] SGHC 199. Accessible at https://www.elitigation.sg/gd/s/2023_SGHC_199.
- ¹⁰ [2023] SGHC 199 at [36].
- ¹¹ [2023] SGHC 199 at [36], that “[the] conclusion has an element of circularity in that it could also be said that the right to enforce in court is what makes it a thing in action”.
- ¹² [2023] SGHC 199 at [36].

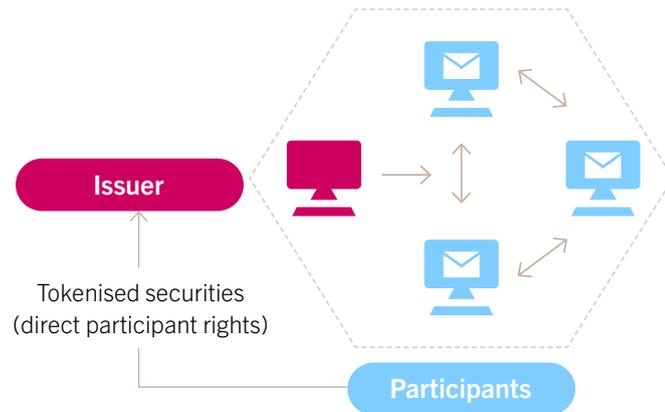




Appendix 2: Models of issuance of digital bonds

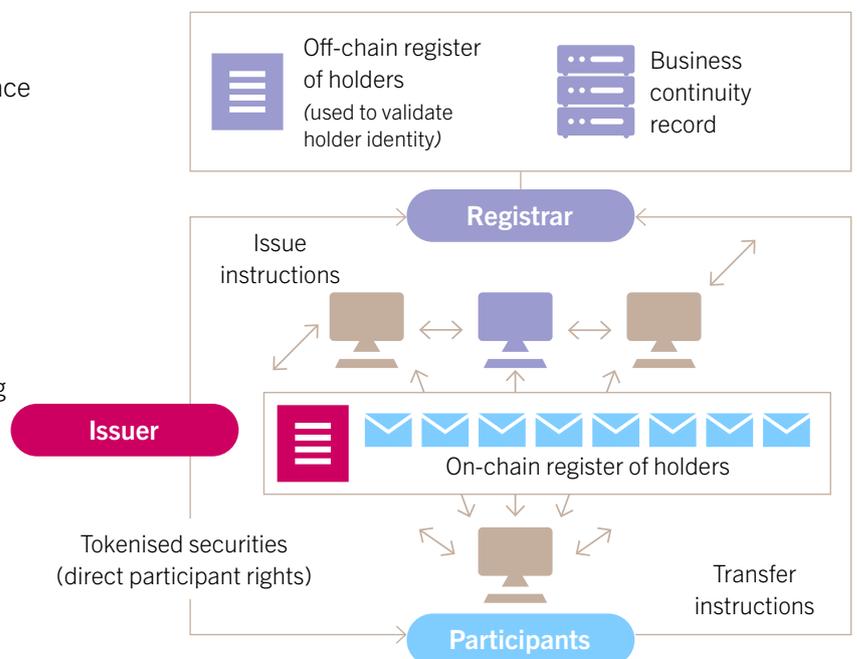
Structure 1: Bearer Tokens

- > **Description:** rights determined by reference to exclusive control of tokens
- > **Characterisation of token:** intangible asset in its own right (tokens recognised as objects of property rights)
- > **Transfer mechanism:** transfer of practical control of tokens
- > **Control of tokens:** token holder has exclusive control



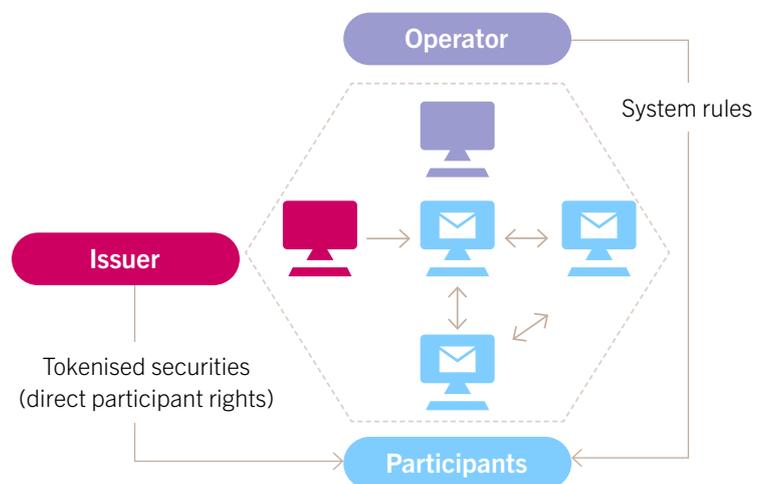
Structure 2: Registered Tokens

- > **Description:** rights determined by reference to a DLT-based register controlled by a registrar (which may be the issuer itself)
- > **Characterisation of token:** mere data/evidence of rights
- > **Transfer mechanism:** updating token balances recorded to a smart contract deployed by the registrar
- > **Control of tokens:** registrar has overriding legal and practical powers to amend the record



Structure 3: Claims Tokens

- > **Description:** rights determined by reference to entries in a DLT-based system controlled by a third-party operator
- > **Characterisation of token:** mere data/evidence of rights
- > **Transfer mechanism:** updating token balances recorded to a smart contract deployed by the operator
- > **Control of tokens:** operator has overriding legal and practical powers to amend the record



*The third-party operator may also maintain separate off-chain records for business continuity and other purposes.



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